CLAIMS:

1.   A method of synthesizing a signal comprising the steps of:

a)   determining of a required pitch bell location,

b)   mapping of the required pitch bell location onto an original signal to provide a
first pitch bell location,

5   c)   randomly shifting the first pitch bell location to provide a second pitch bell
location,

d)   windowing of the original signal on the second pitch bell location to provide a
pitch bell,

e)   repeating of the steps a) to d) for all required pitch bell locations and

10   performing an overlap and add operation with respect to the pitch bells in order to synthesize
the signal.

2.   The method of claim 1 the determination of required pitch bell locations being
performed by dividing the required length of the signal to be synthesized into time intervals,

15   each of the time intervals having the length of a pitch.

3.   The method of claims 1 or 2, whereby the step of randomizing of the first
pitch bell location is performed by randomly shifting the first pitch bell location within an
interval of +/– the pitch.

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4.   The method of any one of the preceding claims 1, 2 or 3, whereby the step of
randomizing the first pitch bell location i to provide the second pitch bell location i' being
performed in accordance with the following equation:

          $i' = i + (R \times p)$,

25   where R is a random number between – 1 and + 1 and p is the pitch.

5.   The method of any one of the preceding claims 1 through 4, whereby the
windowing is performed by mean of a sine-window.

6.   The methods of any one of the preceding claims 1 to 5, whereby the windowing is performed by means of the following sine-window function:

$$w[n] = \sin\left(\frac{\pi.(n+0.5)}{m}\right), \quad 0 \le n < m$$

where m is the length of the window and n is the running index.

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7.   The method of any one of the preceding 1 to 6, whereby the original signal does not have a fundamental frequency, and the original signal, preferably comprising unvoiced speech or music.

10   8.   A computer program product, in particular digital storage medium, comprising program means for performing the steps of:

a)   determining of a required pitch bell location,

b)   mapping of the required pitch bell location onto an original signal to provide a first pitch bell location,

15   c)   randomizing the first pitch bell location to provide a second pitch bell location,

d)   windowing of the original signal on the second pitch bell location to provide a pitch bell,

e)   repeating of the steps a) to d) for all required pitch bell locations and performing an overlap and add operation with respect to the pitch bells in order to synthesize

20   the signal.

9.   A computer system, in particular text-speech synthesis system, for synthesizing a signal, the computer system comprising:

-           means for determining of required pitch bell locations within the signal to be

25   synthesized,

-           means for mapping of the required pitch bell locations onto an original signal to provide first pitch bell locations (i),

-           means for randomizing the first pitch bell locations to provide second pitch bell locations (i'),

30   -   means for windowing of the original signal on the second pitch bell locations to provide pitch bells,

means for performing an overlap and add operation with respect to the pitch bells in order to synthesize the signal.

10.   A synthesized signal comprising a number of pitch bells which are overlapped and added, each of the pitch bells resulting from windowing of an original signal on a second pitch bell location (i'), the second pitch bell location having been obtained by randomizing of a first pitch bell location (i), which is obtained by mapping of a required pitch bell location onto an original signal.